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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,939	01/16/2004	Charles Ray Johns	AUS920030694US1	8205
50170	7590	07/11/2006	EXAMINER	
IBM CORP. (WIP)			KROFCHECK, MICHAEL C	
c/o WALDER INTELLECTUAL PROPERTY LAW, P.C.				
P.O. BOX 832745			ART UNIT	
RICHARDSON, TX 75083			PAPER NUMBER	
			2186	

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/759,939	Applicant(s) JOHNS, CHARLES RAY	
	Examiner Michael Krofcheck	Art Unit 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-6, 8-11 and 14-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-6 and 8-11 is/are allowed.
- 6) ☒ Claim(s) 14-16 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 17, 18, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

SCE/mw
STEPHEN C. ELMORE
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the amendment filed on 5/5/2006.
2. Claims 3, 8-10 have been amended.
3. Claims 1-2, 7, 12-13 have been cancelled.
4. Claims 14-23 have been added.
5. The objections/rejections from the prior correspondence not restated herein have been withdrawn.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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8. Claims 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benkual et al., US patent application publication 2004/0073623 and Wicki et al., US patent application publication 2003/0200395.

9. With respect to claim 14, Benkual teaches of initiating a transfer command on a bus connecting a plurality of processors (fig. 1, 2; paragraph 0006, 0034; the command is transferred to the bridge by a bus and a bus connects the bridge with each processor),

performing, by each given processor within the plurality of processors, a cache snoop of the transfer command to form a snoop response (fig. 3; paragraph 0034);

accumulating snoop responses for the two or more cachelines from the plurality of processors to form a combined snoop response (fig. 3; paragraph 0034); and

broadcasting the combined snoop response to the plurality of processors (fig. 3; 0034).

Wicki teaches of using burst transfers (abstract)

The combination of Benkual and Wicki teaches of wherein the burst transfer command is a request to access a block of data that comprises two or more cachelines (Benkual, paragraph 0010-0011; it is abundantly clear to one of ordinary skill in the art that a command can be directed to data that contains numerous cachelines and the burst length can be set at any length desired);

It would have been obvious to one of ordinary skill in the art having the teachings of Benkual and Wicki at the time of the invention to implement the transfer operations and snoop operations using burst operations in Benkual as taught in Wicki. Their

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motivation would have been to benefit from the efficiency gains of burst transfers, more efficiently using the busses (Wicki, abstract).

10. With respect to claim 19, the combination of Benkual and Wicki teaches of all the limitations cited above with respect to claim 14.

11. Claims 15-16, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benkual and Wicki as applied to claims 14 and 19 above, and further in view of Choate, US patent 5835972.

12. With respect to claims 15 and 20, Choate teaches of wherein initiating a burst transfer command comprises: responsive to a plurality of transfer commands requesting to access a plurality of sequential cachelines from a plurality of entities within an initiating processor, accumulating the plurality of transfer commands to form the burst transfer command (fig. 3-4; column 5, lines 34-57, column 5, line 66-column 6, line 17; as the addresses are sequential, but allowing for occasional skipped bytes, the addresses can be all sequential over numerous cache lines since the size must be greater than or equal to a cache line. It is abundantly clear to one of ordinary skill in the art that many of the sections of a processor can initiate a memory access).

It would have been obvious to one of ordinary skill in the art having the teachings of Benkual, Wicki and Choate at the time of the invention to form the burst transfers in the processors of the combination of Benkual and Wicki as taught in Choate. Their motivation would have been to improve system performance in access to internal or external memory devices (Choate, column 3, lines 14-47).

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13. With respect to claims 16 and 21, the combination of Benkual, Wicki and Choate teach of

responsive to receipt of the combined snoop response at the initiating processor, separating the combined snoop response into a plurality of individual snoop responses (Benkual, fig. 6; paragraph 0054-0055; it is abundantly clear to one of ordinary skill in the art that upon carrying out the snoop responses, the accumulated response is separated into the individual responses opposite the way it was formed); and

forwarding the plurality of individual snoop responses to the plurality of entities within the initiating processor (paragraph 0054-0055).

Allowable Subject Matter

14. Claims 3-6 and 8-11 are allowed.

15. Claims 17-18 and 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

18. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Krofcheck whose telephone number is 571-272-8193. The examiner can normally be reached on Monday - Friday.


20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Krofcheck


STEPHEN C. ELMORE
PRIMARY EXAMINER